

SUBMERGED SAMPLE OBSERVATION APPARATUS AND METHOD

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ABSTRACT OF THE DISCLOSURE

10 An apparatus and a method for observing a submerged
sample are disclosed, in which a scanning probe
microscope comprises a cantilever with a probe arranged
at the forward end thereof, a light source for applying
light to the cantilever and a detector for detecting the
light reflected from the cantilever, the apparatus
further comprising a sample container having a side wall
for holding a liquid therein. The probe is placed in
15 closely opposed relation to the sample in the liquid in
the sample container, and the relative positions of the
probe and the sample are changed, so that based on the
interaction between the probe and the sample, a surface
20 image of the sample is produced to observe the sample. A
device for preventing volatilization of the liquid having
the sample submerged therein is formed on the surface of
the liquid. An insulative liquid layer not mixed with
the surface of the liquid having the sample submerged
25 therein is formed on the surface of the liquid. Only the
forward end of the probe is introduced into the liquid
having the sample submerged therein, while the other
portion of the probe is covered with the insulative
liquid. The light from the light source is applied to
30 the cantilever in the liquid without passing through the
interface between the liquid and the atmosphere, and the
reflected light is picked up in the liquid.